WHAT IS CLAIMED IS:

1. A method in a data processing system for allocating memory by a memory allocation function, comprising the steps defined by the memory allocation function of:

receiving a memory request for a reference to a block of memory;

returning the reference to the block of memory to satisfy the request; and

adjusting an operation of the memory allocation function based on the memory request.

2. The method of claim 1, further including the step of forming a plurality of linked-lists referring to memory blocks of a common size.

3. The method of claim 2, wherein the step of returning includes the step of setting a fast access tree to refer to a first of the plurality of linked-lists.

4. The method of claim 3, further including a step of ensuring that the fast access tree refers to one of the plurality of linked-lists that is most frequently requested.

5. The method of claim 2, wherein the step of returning includes the step of setting a general access tree to refer to a second of the plurality of linked-lists.

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6.　　A method in a data processing system for providing access to a memory that includes an operating system with a system memory call, the memory further including a program which includes a memory access function, comprising the steps performed by the memory access function of:

requesting access to a portion of memory via the system memory call;

receiving from the system memory call a pointer to the portion of memory;

dividing the portion of memory into memory blocks, a plurality of the memory blocks being of different sizes;

forming a plurality of linked-lists, each linked-list referring to memory blocks of a common size, each linked-list having an associated counter;

setting a fast access tree to refer to a first of the plurality of linked-lists;

setting a general access tree to refer to a second of the plurality of linked-lists;

receiving a memory request;

determining which among the plurality of linked-lists contains a memory block that will satisfy the memory request;

incrementing the counter associated with the determined linked-list;

returning a reference to the memory block on the determined linked-list;

comparing the counters of the plurality of linked-lists to identify a predetermined number of linked-lists with a largest counter; and

ensuring that the fast access tree is set to refer to the identified linked-lists with the largest counter.

7.   A system for allocating memory, comprising:

means for receiving a memory request for a reference to a block of memory;

means for returning the reference to the block of memory to satisfy the request; and

means for adjusting an operation of a memory access function based on the memory request.

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8. A data processing system for providing access to memory, comprising:

a memory including:

a program including a memory access function that provides access to memory and that adjusts its operation according to a memory request for a reference to a block of memory; and

a processor for executing the program.

9. The data processing system of claim 8, further including an operating system with a system memory function, and wherein the memory access function provides access to memory by utilizing the system memory function.

10. The data processing system of claim 8, wherein the memory access function includes a plurality of linked-lists referred to by a fast access tree.

11. The data processing system of claim 10, wherein the fast access tree refers to one of the plurality of linked-lists that is most frequently accessed.

12. The data processing system of claim 10, wherein a most frequently accessed memory block size is included in the fast access tree.

13. The data processing system of claim 8, wherein the memory access function includes a plurality of linked-lists referred to by a general access tree.

14. The data processing system of claim 13, wherein a least frequently accessed memory block size is included in the general access tree.

15. The data processing system of claim 8, further including a plurality of linked-lists, each linked-list referring to memory blocks of a common size.

16. The data processing system of claim 15, wherein each of the plurality of linked-lists has an associated counter indicating a number of times that the associated linked-list has been accessed.

17. A computer-readable medium including instructions for performing a method for allocating memory by a memory allocation function, the method comprising the steps performed by the memory allocation function of:

receiving a memory request for a reference to a block of memory;

returning the reference to the block of memory to satisfy the request; and

adjusting an operation of the memory allocation function based on the memory request.

18. The computer-readable medium of claim 15, further including instructions for forming a plurality of linked-lists referring to memory blocks of a common size.

19. The computer-readable medium of claim 18, wherein the instructions for returning include instructions for setting a fast access tree to refer to a first of the plurality of linked-lists.

20. The computer-readable medium of claim 19, further including instructions for inserting a most frequently accessed memory block size into the fast access tree.

21. The computer-readable medium of claim 19, further including instructions for ensuring that the fast access tree refers to one of the plurality of linked-lists that is most frequently requested.

22.   The computer-readable medium of claim 18, wherein the instructions for returning include instructions for setting a general access tree to refer to a second of the plurality of linked-lists.

23.   The computer-readable medium of claim 22, further including instructions for inserting a least frequently accessed memory block size into the general access tree.